

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5270

Port of Rotterdam Date of First Survey 14 May Date of Last Survey 10 Jun 07 No. of Visits 4  
 No. in on the Iron or Steel Steam Tug Thames Port belonging to Rotterdam  
 Reg. Book Built at Rotterdam By whom Rijke & Co When built 1907  
 Owners Int. Canal Sleep-dienst Maats. Owners' Address Rotterdam  
 Yard No. 124 Electric Light Installation fitted by Electrotechnische Industrie When fitted May 1907

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct connected, single cylinder (double acting) Steam dynamo  
375 Rev: per minute

Capacity of Dynamo 70 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed in engine room Whether single or double wire system is used double

Position of Main Switch Board " " " " having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each distribution boxes in Engine room,  
in Engineers Cabin, Captain's Cabin and Crewspace.

If cut outs are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch board to the cables of auxiliary  
 circuits Yes and at each position where a cable is branched or reduced in size Yes and to each lamp circuit Yes

If vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 50 per cent over the normal current

Are all cut outs fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes If wire fuses are used  
 are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Yes

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 50 arranged in the following groups:—

A 13 lights each of 16 candle power requiring a total current of 10 Amperes

B 33 lights each of 16 candle power requiring a total current of 25 Amperes

C Projector lights each of — candle power requiring a total current of 20 Amperes

D — lights each of — candle power requiring a total current of — Amperes

E 2 (three) lights each of — candle power requiring a total current of — Amperes

2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1 1/2 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 1 1/2 Amperes

(Two) 2 Cargo lights of 70 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Carthause (Chartroom)

## DESCRIPTION OF CABLES.

Main cable carrying 70 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, 0.06039 square inches total sectional area

Branch cables carrying 20 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, 0.02270 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0.007052 square inches total sectional area

Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.018100 square inches total sectional area

Cargo light cables carrying 4 Amperes, comprised of — wires, each — L.S.G. diameter, 3 1/2 square inches m/m total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

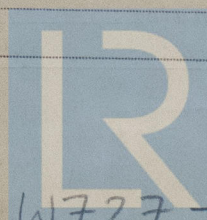
Association wires and cables, vulcanized, composed of tinned copper,  
(100 per cent conductivity) insulated with pure & vulcanizing india  
rubber, taped and braided.

Joints in cables, how made, insulated, and protected none

Are all the joints of cables thoroughly soldered, resin only having been used as a flux Yes Are all joints in accessible positions, none being  
 made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage Yes

Are there any joints in or branches from the cable leading from dynamo to main switch board No

How are the cables led through the ship, and how protected in iron pipes



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**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible yes

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture iron pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat iron pipes

What special protection has been provided for the cables near boiler casings do

What special protection has been provided for the cables in engine room do

How are cables carried through beams iron pipes through bulkheads, &c. water tight

How are cables carried through decks iron pipes with flanges water tight

Are any cables run through coal bunkers yes or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected iron pipes

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage none

If so, how are the lamp fittings and cable terminals specially protected —

Where are the main switches and cut outs for these lights fitted —

If in the spaces, how are they specially protected —

Are any switches or cut outs fitted in bunkers —

Cargo light cables, whether portable or permanently fixed portable How fixed Wall plugs.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel —

How are the returns from the lamps connected to the hull —

Are all the joints with the hull in accessible positions —

The installation is properly supplied with a voltmeter and an amperemeter, fixed on main  
switchboard

**VESSELS BUILT FOR CARRYING PETROLEUM.**

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas —

Are any switches, cut outs, or joints of cables fitted in the pump room or companion —

How are the lamps specially protected in places liable to the accumulation of vapour or gas —

The copper used is guaranteed to have a conductivity of 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1200 megohms per statute mile after 24 hours' immersion in seawater.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

William Fox Electrical Engineers Date 10 June 1907

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 90 feet

Distance between dynamo or electric motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying <u>0.8</u> Amperes	<u>One</u> feet from standard compass	<u>—</u> feet from steering compass
A cable carrying <u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> feet from steering compass
A cable carrying <u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power yes

The maximum deviation due to electric currents, etc., was found to be 0 degrees on — course in the case of the standard compass and 0 degrees on — course in the case of the steering compass.

N. V. WERF v. B. KEE & Co. Builder's Signature. Date —

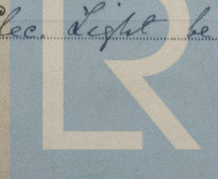
**GENERAL REMARKS.**

The Electric light Installation has been fitted in accordance with the Rules and works satisfactory during the trial.

W. F. D. van Olphen  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

It is submitted that the Record Elec Light be noted in the Reg. Book.



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22.6.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.